



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,417	08/16/2000	Noel Morel	33428-PCT-USA-A	4877
21003	7590	01/16/2004	EXAMINER	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			FISCHER, JUSTIN R	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/641,417

Applicant(s)

MOREL, NOEL

Examiner

Justin R Fischer

Art Unit

1733

20

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 is/are allowed.
- 6) ☒ Claim(s) 5-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 13, 2003 has been entered.
2. Claims 1-4 are cancelled per Amendment submitted on November 13, 2003.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 5-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this instance, applicant has amended the claims to require "two sidewalls of single rubber mixes". The original disclosure fails to define the sidewalls as such, only describing them as "the two rubber sidewalls mixes" (Page 2, Line 5). Furthermore, there is nothing in the original disclosure that excludes the use of a sidewall mix formed of multiple rubber mixes. Thus, there is no support in the

original disclosure for the language "single rubber mixes" and such, this language constitutes new matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama (US 3,825,052, of record) and further in view of Arai (US 4,082,132, of record). Matsuyama and Arai are applied in the same manner as set forth in Paper Number 13, Paragraph 3.

As best depicted in Figure 3, Matsuyama is directed to a heavy duty tire structure having a pair of bead portions, a pair of sidewall portions (depicted as single rubber mixes), and a crown portion, wherein said crown portion is formed by laying a single mix of tread over the radially outer edges of the sidewall rubber mix to form a circular junction. The reference, however, fails to expressly relate the junction point with the equatorial crown radius and the equatorial radius of the carcass structure. In any event, Matsuyama and Arai, which is similarly directed to a heavy duty tire, do provide several measurements that suggest that the tire design of the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention, as set forth below.

It is initially noted that the language "for highway use" fails to further define the structure of the claimed tire article but rather defines the intended use of the claimed tire article. It is suggested that applicant amend the claim as follows to positively define such a vehicle tire: a highway vehicle tire. Furthermore, it is the examiner's position that such an amendment would overcome the rejection set forth in this office action since the invention of Matsuyama is primarily concerned with cut resistance in heavy-duty, off-road construction vehicles. While the reference does generically describe the invention as applicable to steel radial tires for providing additional reinforcement (Column 6, Lines 20-30), a fair reading of the reference as a whole would not suggest the use in a highway vehicle tire construction.

As stated in Paper Number 13 (Paragraph 2), the limitations of the claimed invention are analogous to limitations (1) and (2) set forth above. In this instance, Matsuyama states that a distance y_1 , which is equal to 10% - 30% of the section height (equivalent to equatorial crown radius), separates the junction point from the axially outer edge of the tread. Thus, in the embodiment when $y_1=10\%$ (positively recited embodiment since value is an endpoint), the remaining tire portions (junction radius or height and tread camber) combine to define 90 % of the equatorial crown radius. As a result, to meet the limitations of the claimed invention, the tread camber needs to be less than 10% of the equatorial crown radius. In viewing the figures of Matsuyama, it is clearly evident that the tread camber is extremely small as compared to the section height of the tire. Furthermore, Arai suggests that a flat crown region is desired in heavy duty tires in order to prevent belt edge separation and uneven tread wear, it

being recognized that a flat crown region is analogous to defining a small tread camber (Column 1, Lines 5-36). Thus, in viewing Matsuyama and Arai, one of ordinary skill in the art at the time of the invention would have readily appreciated that the tread camber of Matsuyama is less than 10% of the tire section height, such that the resulting junction point height would be between 80 % and 90 % of the equatorial crown radius.

As per limitation (2), although the position of the carcass centerline height h is not expressly depicted, Hashimura Figure 1 communicates to one of ordinary skill in the art that the radial height j of the junction is in the general vicinity of and a little less than the radial height h of the carcass centerline, **overlapping the second claimed range of $0.9h \leq j \leq h$** . It would therefore have been obvious to one of ordinary skill in the art to set the radial height j of the junction within the range communicated to one of ordinary skill in the art by Hashimura Figure 1 absent unexpected results. It should be noted that in the specification p. 6 starting on line 17 applicant refers to "testing" but provides no data which might support an allegation of unexpected results.

7. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama in view of Arai, as applied to claim 5 above, and further in view of Hashimura (JP 06032114, of record) and Matsui (JP 09-136512, newly cited). Matsuyama, Arai, Hashimura, and Matsui are applied in the same manner as set forth in Paper Number 13, Paragraph 4.

These references, however, fail to suggest a circumferential groove in the region adjacent the junction point (within 10 millimeters radially outward or inward). It is noted, however, that Matsuyama does suggest the inclusion of grooves in the projection region

Art Unit: 1733

(Column 5, Lines 9-17); however, there is no description as to the exact location of the grooves in relation to the junction point. In any event, it is extremely well known and conventional to include a circumferential groove in the shoulder region where the junction point occurs. For example, Hashimura '114 depicts at least a single narrow groove in the shoulder region in order to reduce rolling resistance and provide anti-cracking properties. It should be noted that although Hashimura '114 fails to depict a junction point, it is evident from the figures that the circumferential grooves are positioned just below the equatorial radius of the carcass structure (analogous to junction point in Hashimura '863 and Matsuyama). Thus, one of ordinary skill in the art at the time of the invention would have found the 20 millimeter range of the claimed invention to have been obvious as it defines a plurality of radial positions which are suggested by Hashimura '114, it being noted that 20 millimeters defines approximately 10-20% of a conventional tire section height (depending on specific type of tire). Also, applicant defines a broad range of values for the groove depth (10-30% of sidewall thickness) that one of ordinary skill in the art at the time of the invention would have readily appreciated at the time of the invention. As requested by applicant, Matsui has been provided to evidence the well-known groove construction of the claimed invention, as established by the examiner in the previous office action, in which the depth of the circumferential groove is within 10 to 30 % of the sidewall thickness. As such, it would have been obvious to include a circumferential groove close to the junction point and having a depth between 10 % and 30% of the sidewall thickness since such a groove is conventionally used in the shoulder regions of pneumatic tires for the benefits detailed

above. It is noted that the groove depth of between 0.2 and 0.6 times the sidewall thickness at the location of the groove in Matsui is actually smaller in relation to the sidewall thickness that is measured to the inside wall of the tire (as in the claimed invention). Thus, the lower extreme of the range of Matsui is actually below 0.20 and the higher extreme of Matsui is actually below 0.60, wherein the modified range incorporates nearly every embodiment between 0.10 and 0.30.

Allowable Subject Matter

8. Claim 9 is allowed. The examiner's statement of reasons for allowance has been previously set forth in Paper Number 7, Paragraph 5.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

9. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In this instance, the limitations required by claim 8 are analogous to those set forth by claim 9- as such, the reasons for indicating allowable subject matter are analogous to those identified above. In particular, the prior art references of record failed to suggest, disclose, or teach the claimed groove construction and one of ordinary skill in the art at the time of the invention would not have found such a groove design obvious.

Response to Arguments

10. Applicant's arguments filed November 13, 2003 have been fully considered but they are not persuasive. First, as set forth in the Advisory Action, the rejections of claims 1-3 with Hashimura have been withdrawn in light of the declaration submitted on November 13, 2003. As to the additional issues presented by applicant ("highway use" and "single rubber mixes"), these issues have been addressed in the rejections set forth above.

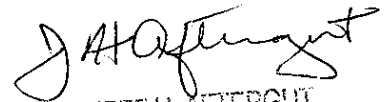
Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


Justin Fischer

January 8, 2004


JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300